Speaker Biographies

Chaim Birnboim, MD

Founder & Chief Scientific Officer, DNA Genotek Inc.

Dr. Chaim Birnboim received his Medical Degree from the University of Manitoba and subsequently trained in Biochemistry and Molecular Biology at the University of Manitoba and the Albert Einstein College of Medicine in New York. He returned to Canada as a Senior Research Scientist at the Chalk River Laboratory of Atomic Energy of Canada. During a sabbatical year at the Institut de Recherche en Biologie Moleculaire in Paris, he invented and published the "*Alkaline Extraction Method for Purifying Plasmid DNA from Bacteria*", a paper that rapidly became the standard procedure in biotechnology labs around the world and was singled out as a 'Citation Classic'. In 1984, he founded the Department of Experimental Oncology at the Ottawa Regional Cancer Centre and, as Head the Ottawa General Hospital Research Committee, was instrumental in establishing what is now the Ottawa Health Research Institute (OHRI). He was a Research Scientist in the Cancer Research group and a Professor in the Department of Biochemistry, Microbiology and Immunology at the University of Ottawa until 2005. He is currently a Professor in the Department of Medicine at the University of Ottawa. His academic research interests have been in the areas of molecular biology and biotechnology, reactive nitrogen oxide species related to carcinogenesis and autoimmunity, and cancer biology. He is the author of over 100 scientific papers and over 10 issued and pending patents. In 2003, he founded a private company, DNA Genotek Inc., where he is currently holds the position of Chief Scientific Officer. In 2011, DNA Genotek became a subsidiary of OraSure Technologies Inc., based in Bethlehem, Pennsylvania. He is the inventor of numerous of nucleic acid-related products, including Oragene®•DNA, Oragene®•RNA, GenoFix and other products in DNA Genotek's portfolio.

Thomas L. Force, MD

Professor of Medicine & Associate Director, Center for Translational Medicine, Temple University School of Medicine

Dr. Thomas Force is Professor of Medicine and Associate Director of the Center for Translational Medicine at Temple University School of Medicine. He received his A.B. from Harvard College, and his MD from Harvard Medical School. He completed his residency training in Internal Medicine at the University of Vermont, and his Cardiology fellowship at the West Roxbury VA Medical Center/Brigham & Women's Hospitals. He was at the Massachusetts General Hospital from 1986 to 2000 where he served as the Medical Director of the Cardiovascular Health Center (1986-1993) and as the Director of the Stress Testing Laboratories (1993-1996), and in addition directed a basic research effort focused on identifying molecular mechanisms regulating growth and death of cardiac myocytes. He moved to the Molecular Cardiology

Research Institute at Tufts University in 2000 to continue that work as Director of the Cardiomyocyte Biology Laboratory. He was Professor of Medicine at Tufts from 2000-2005 and then moved to Philadelphia. He is an Established Investigator of the American Heart Association, is the recipient of the Janice Pfeffer Award of the ISHR, and is President of the Heart Failure Society of America. He served on the editorial board of the Journal of Biological Chemistry (2000-2009) and is currently on the editorial boards of Circulation, Circulation Research, Circulation Heart Failure, and JACC.

He recently chaired the Hypertrophic Cardiomyopathy Working Group of the NHLBI which focused on defining new clinical and basic research initiatives in the study of the disease. He is now co-chair of an NCI/NHLBI initiative addressing cardiotoxicity of cancer therapeutics. Finally, he is on the Basic Cardiovascular Sciences Council of the AHA. He will be moving to Vanderbilt University to direct the Cardiology Division's Basic and Clinical Science initiatives.

Paul Lem, MD

Chief Executive Officer, Spartan Bioscience

Dr. Paul Lem is the CEO of Spartan Bioscience—the leader in on-demand DNA testing. Prior to Spartan, Paul served as VP, Product Management at DNA Genotek. He was also founder and CEO of Plexagen. Paul holds a medical degree from the University of Ottawa, and graduated from the inaugural class of Singularity University.

Philip Marsden, MD, FRCPC

Professor of Medicine
Keenan Chair in Medical Research, St Michael's Hospital
Oreopoulos-Baxter Division Director of Nephrology
Department of Medicine, University of Toronto

Dr. Philip Marsden is a clinician scientist trained at the Brigham and Women's Hospital in Boston. He established an independent laboratory in 1991 at the University of Toronto and St. Michael's Hospital, where he is presently Professor of Medicine, the Keenan Chair in Medical Research and the University of Toronto Division Director of Nephrology. Dr. Marsden has a research program in the field of cellular and molecular regulation of endothelial gene expression. The lab is focused on understanding the contribution of endothelial cells to human health and disease. The lab is especially motivated towards understanding the contribution of important endothelial genes to disease processes and novel aspects of how endothelial genes are regulated.

Brian O'Rourke, B.Sc

President & Chief Executive Officer, Canadian Agency for Drugs and Technologies in Health

Dr. Brian O'Rourke is the President and Chief Executive Officer of the Canadian Agency for Drugs and Technologies in Health (CADTH). He joined CADTH in January of 2009 as the Vice-President of the Common Drug Review (CDR) following a distinguished career as a Pharmacist and Health Services Operations Officer with the Canadian Forces. With more than 28 years in pharmacy practice in various leadership capacities, Dr. O'Rourke actively positions CADTH as the leading source of health technology information in Canada. In carrying out CADTH's mandate, he ensures that CADTH delivers timely and innovative products and services in response to increasingly demanding health care challenges. His leadership activities focus on providing health care decision-makers with evidence-based information, tools, and resources about the effectiveness of drugs and other health technologies in response to the rapid rate of technological changes in health care.

Dr. O'Rourke holds a Bachelor of Science in Pharmacy degree from Dalhousie University and a Doctor of Pharmacy degree from the University of Toronto. He is an active member of the Canadian Pharmacists Association, the Canadian Society of Hospital Pharmacists, and the Canadian College of Health Leaders. As a retired Colonel, Dr. O'Rourke was appointed by the Governor General as an Officer of the Order of Military Merit in 2005.

Naveen L. Pereira, MD

Consultant, Division of Cardiovascular Diseases
Assistant Professor of Medicine, Mayo Clinic College of Medicine

Naveen L. Pereira, M.D., is a Consultant for the Division of Cardiovascular Diseases and Assistant Professor of Medicine, Mayo Clinic College of Medicine. He is board certified in internal medicine and cardiovascular diseases. Dr. Pereira earned his medical degree at University of Bombay. He completed his internship and residency at the University of Connecticut and cardiac fellowship at the Brown University Hospital System and Massachusetts General Hospital. Dr. Pereira has received many awards including the Mayo Clinic Department of Medicine Career Development Award, Marie Ingalls Cardiovascular Career Development Award, Academic Research in Cardiology Award, Transplant Center Scholarly Program Award, and Clinical Immunology and Immunotherapeutic Program Award. He currently is the recipient of the Clinical and Translational Sciences KL2 Award with a focus on translating the genetics of pharmacotherapy. He is the chairperson of the Standards and Guidelines Workforce of the International Society of Heart and Lung Transplantation. Dr. Pereira's research interests include treatment of endstage heart failure, antibody-mediated rejection in heart failure, cardiac allograft hypertrophy, and pharmacogenomics.

Pei Pei Ping, PhD, FAHA

Professor of Medicine & Physiology
Cardiovascular Research Laboratory, UCLA

Dr. Pei Pei Ping is internationally recognized for her expertise and achievements in cardiac organellar biology, functional 'omics, and data science. The Ping laboratory has extensively characterized many proteomic alterations underlying cardiac organellar function and disease phenotypes (Drews et al. Circ Res, 2010; Lau, Wang et al. Circ Res, 2012; Wang, Fang, Zong et al. MCP, 2013). More recently, her group created a novel workflow that integrates deuterium oxide (D2O) labeling, high-resolution mass spectrometry (MS), and custom computational methods to enable the systematic interrogation of in vivo protein turnover in mouse and in human (Lam, Wang, Lau, Liem et al. JCI, 2014; Kim, Wang, Kim, Lau et al. MCP, 2012). In 2009, Dr. Ping was among the early investigators to realize the use of untargeted metabolomics techniques in cardiovascular research (Mayr et al., J Mol Cell Cardiol., 2009). Data from her lab suggested that a "simple" genetic manipulation cardioprotection model (PKCε transgenic mice) could lead to widespread and unanticipated metabolomic consequences best understood through a combination of proteomics and metabolomics studies. Recent efforts in Dr. Ping's metabolomics core involve untargeted and targeted metabolomics profiling of cardiac tissues of heart disease samples. Her group recently published an optimized metabolite extraction protocol, and also disseminated methods to adapt commonplace proteomics instrumentation to identify endogenous metabolites directly from small amounts of cardiac mitochondria, with the goal of integrating proteomics and metabolomics studies for more comprehensive molecular phenotyping of heart diseases. To support these integrative strategies, Dr. Ping has consistently integrated computational tools in her research in developing multiple analytical platforms and software tools, such as those targeted for turnover analysis and post-translational modifications (PTMs) (Deng, Zhang et al. MCP, 2011; Lam et al. J Proteomics, 2012; Wang, Fang, Zong et al. MCP, 2013).

Robert Roberts, B.Sc., M.D., FRCPC, FRSM, FACP, FESC, FAHA, FISHR, MACC, LLD

Chief Executive Officer & Scientific Officer, University of Ottawa Heart Institute

Dr. Robert Roberts was appointed President, Chief Executive Officer and Chief Scientific Officer of the University of Ottawa Heart Institute in 2004. He is also Director of the Ruddy Canadian Cardiovascular Genetics Centre at the Heart Institute and retains an Adjunct Professorship of Medicine at Baylor College of Medicine in Houston, Texas. Dr. Roberts is a major national and international educator and spokesman for molecular genetics and currently serves on the Board of Directors of the Ontario Genomics Institute; the Board of Directors of the Fields Institute, Research in Mathematical Sciences; and the Medical Advisory Board for the Gairdner Foundation.

William Stanford, MD

Senior Scientist, Sprott Centre for Stem Cell Research, The Ottawa Hospital Research Institute

Dr. William (Bill) L. Stanford, PhD, is a Senior Scientist at the Sprott Centre for Stem Cell Research at the Ottawa Hospital Research Institute (OHRI), a Full Professor in the Department of Cellular and Molecular Medicine at the University of Ottawa and holder of a Tier 1 Canada Research Chair in Integrative Stem Cell Biology. Dr. Stanford's research is divided between two major areas: 1) the molecular understanding of stem cell behaviour and 2) the use of this knowledge to model human disease and develop therapeutics. Dr. Stanford is Lead Scientist of the Cell Reprogramming Platform of the Centre for Commercialization of Regenerative Medicine and the Director of the Human Pluripotent Stem Cell Facility in at the OHRI. He holds a PhD in Immunology from the University of North Carolina at Chapel Hill and a Bachelor's degree in Chemistry from Duke University.

Jean-Claude Tardif, MD, FRCPC, FACC, FAHA, FCAHS

Director, Montreal Heart Institute (MHI) Research Centre
Professor of Medicine, University of Montreal

Dr. Jean-Claude Tardif is the Director of the Research Centre at the Montreal Heart Institute and Professor of Medicine at the University of Montreal. Dr. Tardif graduated from the University of Montreal with his medical degree in 1987 and completed his training in cardiology and research in Montreal and Boston in 1994. Dr. Tardif holds the Canada Research Chair in translational and personalized medicine and the University of Montreal endowed research chair in atherosclerosis. He is the Scientific Director of the Montreal Heart Institute Coordinating Centre (MHICC) and Chairman of the steering committees of the CIHR-funded Canadian Atherosclerosis Imaging Network (CAIN) and Medical Imaging Trials NEtwork of Canada (MITNEC). Dr. Tardif has authored and co-authored more than 800 articles and abstracts in peer-reviewed publications including The New England Journal of Medicine, The Journal of the American Medical Association, The Lancet, Circulation, the Journal of the American College of Cardiology, the European Heart Journal, Nature Genetics, Genes and Development, the British Journal of Pharmacology, and Cardiovascular Research. In addition, he has written more than 30 book chapters (including in Braunwald's Textbook of Heart Disease) and has edited several books. He has given approximately 400 invited lectures around the world. His research covers the molecular and genomic aspects of atherosclerosis and related diseases and also involves animal models, mechanistic and observational clinical studies as well as large international randomized clinical trials. Dr. Tardif is or has been the international principal investigator or part of the study leadership of several large clinical trials in the field of atherosclerosis and other cardiovascular diseases. Dr. Tardif and his team have created the Beaulieu-Saucier Pharmacogenomics Center at the Montreal Heart Institute and he has created the Center of Excellence in Personalized Medicine (CEPMed), the latter funded by the Network of Centers of Excellence (NCE) of Canada and which is also supported by multiple pharmaceutical and biotechnological companies. He is one of the founding fathers of the Critical Markers Of Disease (CMOD) organization, which focuses on the development and better use of biomarkers (www.cmod.org). Dr. Tardif has won multiple awards during his

career, including the Research Achievement Award of the Canadian Cardiovascular Society, the Genesis Award of Bio-Québec (for his outstanding contributions to life sciences) and the Armand-Frappier Award of the Government of Quebec. He was also named scientific personality of the year by La Presse newspaper. Because of his accomplishments, Dr Tardif was named Fellow of the Canadian Academy of Health Sciences (FCAHS).